

This listing of claims will replace all prior versions and listings of the claims in this application:

Listing of the Claims:

Claims 1-27 (Canceled)

Claim 28 (Withdrawn) A headend for a television program delivery system which delivers program signals containing a plurality of video signals to one or more set top terminals, the headend comprising:

 a plurality of integrated receiver components for processing program signals, each comprising:

 a demodulator means for demodulating the program signal for further processing; and

 a demultiplexer for demultiplexing the program signal into a plurality of video signals;

 a means for selecting among the plurality of video signals comprising:

 a control CPU for instructing on video signals to be selected;

 a combiner for combining selected video signals comprising:

 a means for temporarily storing portions of individual video signals; and

 a means for assembling various stored portions of individual video signals into a combined signal;

 a transmitter means for transmitting the combined signal to set top terminals; and transmission media, connected to the transmitter means, to carry the transmitted signal to the set top terminals.

Claim 29 (Withdrawn) The headend of claim 28 wherein the transmission media comprises telephone lines.

Claims 30 (Withdrawn) A signal processor for a cable headend wherein the signal processor receives program signals and a program information data signal comprising:

 first receiving means for receiving a plurality of program signals;

 second receiving means for receiving a program information data signal;

 means for selecting among the plurality of program signals using the received program information data signal;

 first combiner means for combining the selected program signals comprising:

means for temporarily storing portions of the selected program signals during a first combining process;

second combiner means for combining the program information data signal with the combined selected program signals to generate a combined signal; and

means for distributing the combined signal to cable subscribers.

Claim 31 (Previously Amended) A cable headend for a television program delivery system which uses a plurality of video signals and instructions, and wherein set top terminals communicate with the cable headend, the cable headend comprising:

a signal processor for processing a plurality of video signals comprising:

means for receiving a plurality of video signals;

means for selecting video signals from the plurality of video signals; and

combiner means for combining the selected video signals for distribution to set top terminals;

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cont. a network controller for controlling the operation of the signal processor and the set top terminals comprising:

means for obtaining communications from the set top terminals;

a computer processor, connected to the obtaining means, for generating instructions to the signal processor using the communications from the set top terminals; and

means for transferring the instructions to the signal processor to be used for selecting video signals; and

a means for distributing the combined video signals to the set top terminals.

Claim 32 (Withdrawn) A digital cable headend for a cable television program delivery system which uses a satellite transponder to deliver video programs in digital format to subscribers on a concatenated cable system, wherein the cable headend receives local programs and information on the insertion of local programs into the delivery system, the digital cable headend comprising:

means for receiving transponded signals containing digital video programs;

integrated receiver decoder means for receiving and decoding the transponded signals;

means for demultiplexing the decoded signals into digital video programs;

processor means for generating a local program information signal using information on insertion of local programs with the received digital video program signals;

means for inserting local programs comprising:

means for obtaining local programs in digital format; and

means for communicating with the processor to receive the generated local program information signal;

means for multiplexing the digital video programs and local programs into a combined signal;

means for modulating the combined signal for transmission;

means for distributing the modulated signal to subscribers on a concatenated cable system.

Claim 33 (Withdrawn) A modular cable headend for a cable television program delivery system which receives program signals, at least one of the program signals having digitized programs, and services a plurality of set top terminals, wherein set top terminals receive processed signals from the cable headend, the modular cable headend comprising:

a first set of signal processing equipment comprising:

means for receiving program signals for processing; and

means for processing one or more of the program signals into a first processed signal;

a second set of signal processing equipment comprising:

means for receiving program signals with digitized programs; and

means for processing one or more of the digitized programs into a second processed signal;

means, connected to the first set of signal processing equipment and the second set of signal processing equipment, for adding the first processed signal to the second processed signal to produce an added signal containing more programs than either processed signal; and

means for distributing the added signal to a plurality of set top terminals.

Claim 34 (Withdrawn) The modular cable headend of claim 33 wherein some of the plurality of set top terminals are only distributed the first processed signal, the modular cable headend further comprising:

means, connected to the first set of signal processing equipment, for distributing the first processed signal to some of the plurality of set top terminals.

Claim 35 (Withdrawn) The modular cable headend of claim 33 wherein the television program delivery system uses two groups of satellite transponders, a first group and a second group, to deliver television programs to subscribers on a concatenated cable system, and wherein the means for receiving program signals comprises means for obtaining transponded signals from the first group of satellite transponders; and wherein the means for receiving program signals with digitized programs comprises means for obtaining transponded signals from the second group of satellite transponders.

Claims 36 (Withdrawn) A cable headend for a television program delivery system which uses groups of satellite transponders to deliver television programs in digital format to subscribers on a concatenated cable system, wherein the cable headend groups television programs distributed to subscribers into priority levels, the cable headend comprising:

means for receiving transponded signals containing digital video programs;

integrated receiver means for receiving the transponded signal;

means for grouping transponded signals into priority levels wherein a first group of transponded signals are priority level one and a second group of transponded signals are priority level two;

means for demultiplexing the priority level one transponded signals into priority level one digital programs and priority level two transponded signals into priority level two digital programs;

first means for selecting priority level one digital programs;

second means for selecting priority level two digital programs; and

means for combining selected priority level one and priority level two digital programs for distribution to subscribers.

Claim 37 (Withdrawn) The modular cable headend of claim 33 wherein the means for processing one or more of the digitized programs divides the program signals into priority levels, each priority level containing one or more of the digitized programs, and wherein the means for distributing distributes the added signal to one or more of the plurality of set top terminals using the priority levels of the digitized programs contained in the added signal.

Claim 38 (Withdrawn) The modular cable headend of claim 37 wherein the means for receiving program signals with digitized programs includes means for obtaining transponded

signals from groups of satellite transponders and wherein the priority levels that the digitized programs are divided into is determined by the group of transponders from which each program signal is obtained.

Claim 39 (Withdrawn) The modular cable headend of claim 37 wherein the means for processing the digitized programs into a second processed signal comprises:

a means for selecting digitized programs from the program signals based on the priority level of the digitized programs; and

a means, connected to the selecting means, for combining the selected digitized programs into the second processed signal.

Claim 40 (Withdrawn) The modular cable headend of claim 37 wherein the program signals with digitized programs have headers and the priority levels of the digitized programs are divided into is indicated by the headers.

Claim 41 (Withdrawn) The modular cable headend of claim 37 wherein the program signals with digitized programs include different types of programming and the priority levels of the digitized programs are determined by the type of programming of each digitized program.

Claim 42 (Withdrawn) The modular cable headend of claim 37 wherein the priority levels of the digitized programs includes one or more of the following: priority level one, priority level two, or priority level three.

Claim 43 (Withdrawn) The modular cable headend of claim 42 wherein the program signals with digitized programs include different types of programming, including most profitable or most watched programming, and wherein priority level one includes the most profitable or the most watched programming.

Claim 44 (Withdrawn) A method for distributing program signals received in a cable headend comprising the steps of:

receiving a plurality of program signals, wherein the program signals contain channels or programs;

processing the program signals, wherein the processing step comprises the steps of:

dividing the program signals into priority levels, wherein each priority level contains one or more channels or programs;

selecting channels or programs based on the priority levels of the channels or programs; and

combining the selected channels or programs into a processed program signal; and

distributing the processed program signal to a plurality of set top terminals.

Claim 45 (Withdrawn) The method of claim 44 wherein the program signals includes headers that define the priority level of the channels or programs in the program signals, and wherein the step of dividing the program signals includes the step of:

reading the headers of the program signals to determine the priority level of the channels or programs.

Claim 46 (Withdrawn) The method of claims 44 wherein each of the program signals are received from one of a plurality of groups of transponders, and wherein the step of dividing the program signals includes the step of:

determining from which group of transponders each of the program signals was received.

Claim 47 (Original) A system for cherry-picking desired digital programs or channels from one or more multiplexed signals comprising:

a CPU, wherein the CPU manages, monitors, ensures that the desired digital programs or channels are selected, and sends instructions;

a demultiplexer, wherein the demultiplexer receives the signals, performs selection of the desired programs or channels according to instructions sent from the CPU, and outputs the selected programs or channels;

a combiner, wherein the combiner accepts the outputted selected programs or channels from the demultiplexer and combines the selected programs or channels into a combined signal for transmission according to instructions sent from the CPU; and

wherein the CPU manages and monitors the demultiplexer and the combiner.

Claim 48 (Original) The system of claim 47, wherein the demultiplexer separates the multiplexed signals into individual digital programs or channels.

Claim 49 (Original) The system of claim 47 further comprising a local insertion device, wherein the local insertion device receives one or more local programs and outputs one or more local programs to the combiner, and wherein the combiner combines the output local programs with the selected programs or channels.

Claim 50 (Withdrawn) The system of claim 47 wherein the CPU is instructed from a remote site using modem communication.

Claim 51 (Withdrawn) The system of claim 47 wherein one or more analog program signals are received, the system further comprising:

a digital encoder, wherein the digital encoder digitizes the received one or more analog signals and outputs the digitized signals to the combiner, wherein the combiner combines the digitized signals with the selected programs or channels.

Claim 52 (Withdrawn) The system of claim 47 wherein the received signals are encrypted, the system further comprising:

decryption equipment, connected to the demultiplexer, wherein the decryption equipment removes encryption.

Claim 53 (Withdrawn) The system of claim 47 further comprising:

encryption equipment, connected to the combiner, wherein the encryption equipment adds encryption.

Claim 54 (Withdrawn) The system of claim 47 further comprising:

error correction equipment, connected to the demultiplexer, wherein the error correction equipment performs error correction.

Claim 55 (Withdrawn) The system of claim 47 further comprising:

a receiver; and

a modulator, wherein the modulator modulates the combined signal for transmission.

Claim 56 (Withdrawn) The system of claim 47 wherein the instructions comprise control signals.

Claim 57 (Currently Amended) A system for cherry-picking desired digital programs or channels from one or more multiplexed signals comprising:

a CPU, wherein the CPU manages, monitors, ensures that the desired digital programs or channels are selected, and sends instructions;

a digital logic component, wherein the digital logic component selects the desired digital programs or channels according to instructions sent by the CPU and outputs the selected digital programs or channels;

a serializer, wherein the serializer combines the selected programs or channels into a signal for transmission according to instructions sent by the CPU; and

wherein the CPU manages and monitors the digital logic component ~~and the serializer.~~

Claim 58 (Original) The system of claim 57 further comprising:

a demultiplexer, wherein the demultiplexer separates the multiplexed signals into individual digital programs or channels.

Claim 59 (Original) The system of claim 57 further comprising a local insertion device, wherein the local insertion device receives one or more local programs and outputs one or more local programs to the serializer, and wherein the serializer combines the output local programs with the selected programs or channels.

Claim 60 (Withdrawn) The system of claim 57 wherein the CPU is instructed from a remote site using modem communication.

Claim 61 (Withdrawn) The system of claim 57 wherein one or more analog program signals are received, the system further comprising:

a digital encoder, wherein the digital encoder digitizes the received one or more analog signals and outputs the digitized signals to the serializer, wherein the serializer combines the digitized signals with the selected programs or channels.

Claim 62 (Withdrawn) The system of claim 57 wherein the received signals are encrypted, the system further comprising:

decryption equipment, connected to the digital logic component, wherein the decryption equipment removes encryption.

Claim 63 (Withdrawn) The system of claim 57 further comprising:
encryption equipment, connected to the serializer, wherein the encryption equipment adds encryption.

Claim 64 (Withdrawn) The system of claim 57 further comprising:
error correction equipment, connected to the digital logic component, wherein the error correction equipment performs error correction.

Claim 65 (Original) The system of claim 57 further comprising
a receiver; and

a modulator, wherein the modulator modulates the combines signal for transmission.

Claim 66 (Original) The system of claim 57 wherein the instructions comprise control signals.

Claim 67 (Original) A method for cherry-picking desired digital programs or channels from one or more multiplexed signals comprising the steps of:

receiving information and one or more multiplexed signals containing a plurality of digital programs or channels, wherein the information includes data on identities of the desired digital programs or channels;

generating instructions regarding the desired digital programs or channels, wherein the instructions are generated using the received information;

selecting the desired digital programs or channels using the generated instructions, wherein the selected digital programs or channels are a subset of the plurality of digital programs or channels contained in the multiplexed signals; and

combining the selected digital programs or channels into a combined signal for transmission.

Claim 68 (Original) The method of claim 67, further comprising the step of demultiplexing the multiplexed signals into individual digital programs or channels.

Claim 69 (Original) The method of claim 67 further comprising the step of:

inserting one or more local programs, wherein the local programs are combined with the selected digital programs or channels in the combining step.

Claim 70 (Original) A method for filtering unwanted digital programs or channels from one or more multiplexed signals, comprising the steps of:

receiving information and one or more multiplexed signals containing a plurality of digital programs or channels, wherein the information includes data on identities of the digital programs or channels;

generating instructions regarding the digital programs or channels, wherein the instructions are based on the received information;

removing unwanted digital programs or channels using the generated instructions, wherein the unwanted digital programs or channels are a subset of the plurality of digital programs or channels contained in the multiplexed signals and whereby removing the unwanted digital programs or channels leaves the remaining plurality of digital programs or channels contained in the multiplexed signals; and

combining the remaining plurality of digital programs or channels into a combined signal for transmission.

Claim 71 (Original) The method of claim 70, further comprising the step of demultiplexing the multiplexed signals into individual digital programs or channels.

Claim 72 (Original) The method of claim 70 wherein the information received includes identities of the unwanted digital programs or channels.

Claim 73 (Original) The method of claim 70 wherein the generated instructions comprise identities of the unwanted digital programs or channels and whereby the removing step uses the generated instructions to remove the unwanted digital programs or channels.

Claim 74 (Previously presented) A method for cherry-picking desired digital programs or channels from a multiplexed signal comprising the steps of:

receiving information and a multiplexed signal containing a plurality of digital programs or channels, wherein the information includes data on identities of the desired digital programs or channels;

generating instructions regarding the desired digital programs or channels, wherein the instructions are generated using the received information;

selecting the desired digital programs or channels using the generated instructions, wherein the selected digital programs or channels are a subset of the plurality of digital programs or channels contained in the multiplexed signal; and

combining the selected digital programs or channels into a combined signal for transmission.

Claim 75 (Previously presented) The method of claim 74 wherein the combining step comprises a serializer combining the selected digital programs or channels into a combined signal for transmission.

Claim 76 (Previously presented) The method of claim 74 wherein the selecting step comprises digital logic selecting the desired digital programs or channels using the generated instructions.

Claim 77 (Previously presented) A method for cherry-picking desired digital programs or channels from a multiplexed signal comprising the steps of:

receiving information and a plurality of multiplexed signals, each multiplexed signal containing a plurality of digital programs or channels, wherein the information includes data on identities of the desired digital programs or channels;

generating instructions regarding the desired digital programs or channels, wherein the instructions are generated using the received information;

selecting the desired digital programs or channels using the generated instructions, wherein the selected digital programs or channels are a subset of the plurality of digital programs or channels contained in the multiplexed signals; and

combining the selected digital programs or channels into a combined signal for transmission.

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Claim 78 (Previously presented) The method of claim 77 wherein the combining step comprises a serializer combining the selected digital programs or channels into a combined signal for transmission.

Claim 79 (Previously presented) The method of claim 77 wherein the selecting step comprises digital logic selecting the desired digital programs or channels using the generated instructions.
